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A LETTER

TO A FRIEND,

CONTAINING OBSERVATIONS ON THE COMPARATIVE MERITS OF

CANALS AND RAILWAYS,

OCCASIONED

BY THE REPORTS OF THE COMMITTEE,

OF THE

LIVERPOOL AND MANCHESTER RAILWAY:

BIBLIOTHECA BODLEIANA

"Quid enim miretur quisque, in hoc primum? inventorem an inventum? artificem an auctorem? ausum aliquem hoc excogitare aut suscipere? parere an jubere? super omnia erit populi furor sedere ausi tam infida, instabilique sede.—"

En hic est . . . . . (populus Romanus) in machinà pendens et ad periculum suum plaudens.—

Plin. Hist. Nat. l. XXXVI. *c.* 15.

LONGMAN & Co., PATERNOSTER ROW;
AND ROBERT FENN, CHARING CROSS.

1832.

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A LETTER, &c.

My Dear Sir,

I wrote to you from Liverpool some observations on the Railway. During the time which has since elapsed, I have employed myself in making enquiries of all persons likely to give me information, and fortunately the Liverpool Railway Company have just published their half yearly statement, which enables me to give you *some kind* of opinion upon the question between the relative advantages of Railways and Canals, the solution of which formed the leading object of my journey.

With respect to the mode of conveying passengers you must yourself have seen the expedition; and when it is recollected that 427,671 persons have passed on it between Sept. 16th, 1830, and Sept. 17th, 1831, and that no accident happened to any but what has arisen from their own carelessness, the safety, combined with the advantages from speed, is astonishing. Still the steep declivity on the side of the embankment, and the almost absolute certainty that if the locomotive engine swerve from its proper course, there must be great injury to the carriages and the passengers, leave on the mind a sense of danger which no calculation can remove. Nevertheless females &c. crowd on it daily, and the probable deficiency of passengers during the next current year, which is to be anticipated from public curiosity having subsided, will be supplied by an increase of those who have hitherto abstained from timidity. I understand that Mr. Nimmo proposes to obviate the contingency of danger from falling over the embankment, in his rival Railway to Leeds, by a parapet of earth on each side, which he considers preferable to a wall as affording a *dead* resistance.

There is also an inconvenience which the Company themselves have experienced, and which you will see by their report they intend to remedy, namely the distance of the Engine stations or points of departure from the centre of the town of Liverpool, the conveyance by the *Omnibus* being a heavy charge as well as attended with much inconvenience, but whether an expenditure of £.100,000 to produce only a 5 per cent interest, would be a wise one, the object being now effected by an annual outlay, is a question certainly doubtful.

For passengers then the Railway seems to have perfectly answered, with respect to expedition; but I presume the rate of travelling cannot be safely extended beyond 20 miles per hour; for although there are some parts of the line where the speed may exceed 25 miles per hour, still the ascent at Whiston, which is 1 in 96, always presents a considerable Obstacle ~~oae,elbsta~~ nd the descent from the Rainhill level towards Liverpool, rendering it necessary for the Engine to be restrained, prevents the regular rate of speed from being kept up for the whole way, but I do not hesitate to say, that at equal rates of speed and of price, I should prefer the railway to any mode of travelling by horses which I ever experienced.

Previous to the publication of the Liverpool and Manchester report, the general opinion entertained by all the intelligent persons with whom I conversed, was that the project had fully succeeded for Passengers and light goods, but would prove inadequate to the object at first proposed (viz.) the conveyance of heavy goods, and that even its success in the latter instance would be no argument in favor of similar schemes under dissimilar circumstances. I do not lay any stress on the objection that has been urged by some, who are unfriendly to the Railway, that the speculation of its projectors has failed, because they considered heavy goods as their leading object, and travelling as subsidiary only, for it is to the credit of the Railway Committee and their Engineer, that their minds have proceded with their work, that the genius of the Engineer has expanded with unexpected success; and that the liberality of the Committee has kept pace with the extension of their views in the progress of the undertaking; their combined efforts have produced an effect which was never anticipated, and an experiment has been tried which does honour to the country in which we live, and to the age which has produced it. But when it is held up as a pattern for general imitation, and as establishing, decidedly the superiority of Railways above all other means of conveyance, when it is asserted that the expenditure of any sum to accomplish similar undertakings is justifiable, and that the same system universally adopted throughout the kingdom must supersede all other means of communication; we must look into the subject more accurately, and submit it to a comparison which may direct the cooler judgment of the public. To make this comparison, Railways and Canals must be measured by a common standard, and the report of the Railway Company furnishes us with sufficient information to enter into this comparison; for although those accounts are not produced in the ordinary manner in which accounts of the kind have hitherto been kept, yet the items they contain will enable me to make such a statement as persons conversant with Canal accounts cannot mistake.

The Railway Company are engaged in two different concerns, which in most Railways, Canals and Rivers are quite distinct.

1. As having invested their money in a Road for which they are entitled to certain Tolls, Rates, and Duties for every person travelling, and goods conveyed on it.

2. As Carriers engaged in the conveyance of passengers and goods on it for a certain price.

The prices at which the Company are to carry passengers and goods are limited by Parliament, but you will find that as long as the Company continue to be Carriers at those prices, no person can compete with them.

I shall commence my observations with considering them under the *second* character as carriers; as I think the subject will be thus more clearly understood.

Whether the articles carried are alive or dead, whether they are coals or bales, human creatures or brute animals, the predicate in which we are to consider them is as articles, for the conveyance of which, *freight* is to be paid by the consumers to the carriers.

Freight is compounded of three ingredients.

1. The sum which is actually paid for the Loco-motive power which I call *conveyance.*

2. The *Tolls* or sum paid to the Canal or Rail Road Proprietors.
3. The Profit to the carrier to indemnify him for his advance of capital, risque of bad debts, maintenance of and provision for his family &c.

We have in their report the expence of conveying passengers which reckoning twelve persons to weigh a ton, at 13½*d.* each person, is 13*s.* 6*d.* per ton, or about 8¾*d.* per cwt. The average amount which they have received for conveying each passenger is 4*s.* 7½*d.*, or 55*s.* 6*d.* per ton.

Their account then as *Carriers of Passengers* stands thus :

	£.	s.	d.	£.	s.	d.
Dr.						
Conveyance of 12 Passengers weighing 1 ton -	0	13	6			
Tolls at 4*s.* each -	2	8	0			
Cr.				3	1	6
Amount received for 12 passengers at 4*s.* 7½*d.*				2	15	6
Difference, being a loss per ton of - -				£.0	6	0

Let us now consider the Company as *Carriers* of goods. It appears from the report that the amount of their actual *disbursements* on every ton of goods conveyed by them between Liverpool and Manchester is

	s.	d.
In the Merchandize department	3	10½
For Loco-motive power, &c.	1	8¾
Together - -	5	7¼

To these disbursements ought to be added, interest on the capital employed, a per centage on the deterioration of the Engines and Carriages, and a reasonable sum for the rent of Warehouses,

&c. Leaving these items out of the calculation and proceeding in the same manner as in my former statement, I add to the above sum of 5*s.* 7¼*d.*, the amount of the tolls payable to the Railway Company, on the goods carried. As the freight received for these goods is stated to have been 10*s.* 3*d.*, per ton, and as this sum is nearly the mean between 9*s.* and 11*s.*, the sums chargeable for freight in the two last schedules, the goods must have been of the description liable to the payment of the rates specified in those schedules, being respectively 2½*d.* and 3*d.* per ton per mile. Calculating it at 2¾*d.* (the mean of these sums,) the amount of the tolls for thirty miles, the distance chargeable will be 6*s.* 10½*d.* per ton and their account as *Carriers of Goods* will stand thus:

	s.	d.
Dr.		
Amount of *disbursements* per ton, as above stated - -	5	7½
Tolls per ton - - -	6	10½
Cr.	12	6
Amount of freight received -	10	3
Difference being a loss per ton of -	2	3

It is clear then that no carrier could carry on his trade and pay tolls equal to the amount of those granted by Parliament, and that the loss would be on passengers, 6*s.* per ton, on goods, 2*s.* 3*d.*

I have collected with considerable care the rates of freight, payable on some of the leading lines of inland navigation in England, viz.

I. Those between London and Manchester, through the Regent's, Grand Junction, Oxford, Coventry, Grand Trunk, and Duke of Bridgewater's Canal.

II. Those between London and the Potteries, by the same canals, with the exception of the Duke of Bridgewater's.

III. Those between London and Birmingham, by the Regent's, Grand Junction, Oxford, Warwick and Napton, and Warwick and Birmingham Canals.

IV. Those between London and Bristol, by the Thames and Kennet rivers, the Kennet and Avon canal, and river Avon.

And I find that on goods of a similar description to those which have been conveyed principally on the Manchester and Liverpool Railway, the freights and tolls are as under.

	Distance in miles.	Tolls.		Total freight.	Freight for 30 miles.
		s.	d.	s.	s.
1. Manchester and London,	262	33	6	65	9
2. London and the Potteries,	202	31	8	56	8
3. London and Birmingham,	150	28	7½	50	10
4. London and Bristol,	167	24	10½	50	9

That in all these instances the *full Tolls* granted by the Canal Acts, are paid by the carrier, and that his freight is on the average about *double* or rather less than double the amount of the tolls.

That for a ton of passengers nearly as much freight is paid between Liverpool and Manchester a distance of 30 miles, as for a ton of high priced goods between London and Manchester, a distance of 262 miles, and more than between London and the other places above mentioned.

It will be observed from the preceding table that all the articles of merchandise paying the highest freight and highest tonnage are carried on the different navigations, for every 30 miles, for a less sum than that which is paid on the Liverpool and Manchester Railway, which is the same distance, which latter is to be particularly noticed is not sufficient either to pay the *full* tonnage to the proprietors of the Railway, or *any* profit to the carrier of the goods. The preceding remarks apply to goods of a high value only, both as regards the canals and the Railway, but it is to be recollected that by far the greater proportion of articles conveyed by inland navigation consist of goods of a low value, such as Iron, Coals, Stone, Grain, Timber, Manure, &c., which are carried at much lower rates both of tolls and freight. Between Manchester and London and the Potteries and London few low priced articles are carried at all, because they *will not bear the expence of conveyance by inland communication and therefore go by sea.*

	Freight.	Tolls.
	s.	s.
Between London and Birmingham, Iron is carried for	22	9
London and Bristol, Iron	21	11
London and Bath, Stone	18	9

Thus then stand the facts as to the prices of *Freight*, the existing lines of inland navigation, and the possible extension of the most efficient Railway which can be formed in England; for the warmest friends of them will scarcely deny that such another line as the Liverpool and Manchester Railway, cannot be found in any of the great lines of communication. Mile for mile therefore, goods are not carried so cheap on the Liverpool and Manchester Railway, as on the great lines of canals, and can neither remunerate the carrier as to his freight, nor the Proprietor as to his tolls in the same manner as canals do. On the great navigable rivers, the comparison is still more unfavorable to Railways. Although with the profit of the individual Railway as an adventure, the public have but little to do, still it may be useful to the formers of similar projects, to make a few observations on the *first* head under which I proposed to treat the subject on the situation of the company as Proprietors of the Railway, distinct from carriers upon it.

There are reasons for some Canal companies becoming carriers which do not apply to others. On the Grand Trunk or Trent and Mersey for example, there is no power to reduce tonnages on certain articles, and therefore the company become carriers of those articles, merely for the purpose of obtaining the amount of the tolls.

By acting as carriers the Liverpool and Manchester Railway company, cannot obtain the full amount of their tolls, the loss in passengers, per ton, being as above stated 6*s*. or 6*d*. per passenger, equal to one eighth of the parliamentary dues, and on goods, 2*s*. 3*d*. or nearly 1*d*. per ton, per mile, being about one third of the parliamentary dues.

The *sundry disbursements* stated in the report, in my estimation comprehend those articles of expence, which in canal and railway concerns should be deducted from the gross receipts of the tolls, before the net income of the company can be stated.

The receipts of the Company for every ton of passengers are - -	£.2 15*s*. 6*d*.
Deduct the conveyance -	0 13*s*. 6*d*.
Remainder	£.2 2*s*. 0*d*.

Which leaves only 3*s*. 6*d*. per passenger instead of 4*s*., and the expence of maintaining the Railway is stated to be 10½*d*. per passenger, or per ton - - - 10*s*. 6*d*.
being 25 per cent on the tolls.

The expences on the tolls taken on goods have been as 2*s*. 8*d*. to 4*s*. 7½*d*., or four ninths nearly of their receipts.

One word more as to the merchandise department. The directors state "that the disburse-"ments are considerably heavier than they anti-"cipated, but that the expence of carriage will "not keep pace in the same ratio with the increase "of *tonnage*." I do not understand what is meant here by *tonnage*, but if it is meant that if the quantity of goods carried should increase, the disbursements *per ton* for their conveyance will be less than for those goods hitherto carried, I think that the directors will find themselves mistaken. All their disbursements in the mercantile department being exclusively for *labor*, comprised under the denominations of porterage, salaries, cartages &c. and the locomotive powers.

Every ton of goods carried requires the same porterage, salaries, and cartages, and with the increase of goods there must be the same increase of porters, carts, &c. There must be also an increased number of carriages and loco-motives, so that the same ratio will exist between the rate of conveyance and the tolls now paid which are 2*s.* 3*d.* per ton less than the parliamentary tonnage granted them, although as carriers they have no profit at all.

A *priori* therefore a Railway made under the most favourable circumstances, could not compete with canals or river navigations parallel to them, and of the same length, in the freight of low priced goods, because the goods can be conveyed on the latter at a cheaper rate per ton per mile, and the carrier can maintain himself with a living profit, paying the full parliamentary tolls, and the canal proprietors need not upon high priced and valuable goods make any abatement of tolls.

Upon canals and rivers the mere price of conveyance being very low, the proprietors can make large abatements upon articles in which cheapness is most important, still leaving a profit to the carrier upon the carriage of the articles, or to the merchant upon the sale, where he acts only as carrier for the purpose of sale, a coal merchant for instance. But on the Railway the disbursements being the same in the merchandise department, all abatements must be made on the tolls; and on the highest priced articles, it appears that two thirds only of the tonnage can be received; and on low priced articles no tonnage whatsoever, for on canals, or rivers, we find that low priced articles, such as coal, stone, lime stone, iron, &c. can be conveyed per ton per mile leaving a toll receivable by the proprietors and a profit to the carrier, at 40 per cent less than the mere disbursements for labor on the railway. These *disbursements* at 5*s*. 7½*d*. for 30 miles, are 2¼*d*. per ton per mile.

On the Kennet and Avon canal, building stone from Bath, is carried 150 miles for 18*s*. per ton, or 1¼*d*. per ton per mile, the canals and rivers on which it is conveyed receiving 9*s*. per ton.

On the Birmingham, Coventry, Oxford, and Grand Junction Lines. *Iron* from Tipton, is conveyed at 22*s*. per ton 187 miles or 1¼*d*. per ton per mile paying 9*s*. 5*d*. in tolls.

We find facts confirming this analogy of reasoning in favour of the competition of canals and rivers with Railways; for on the Duke of Bridgewaters canal, and the Mersey and Irwell navigations, it has been found that not only every description of goods are carried as cheap as on the Railway, but that during the last year, there have been more goods carried on those two navigations than for many years past. Yet on those navigations, the distances between Liverpool and Manchester are, in the former nineteen miles, in the latter fourteen miles more than by the Railway.

It is indeed true that a monopoly in some degree injurious to the public interest has been diminished by the railway, as the price of freight between Liverpool and Manchester, has been reduced one-third, viz. from 15*s.* to 10*s.* but to enable the bye-carriers (as they are called) to effect this reduction, the tolls on the Dukes canal have been reduced viz. from 3*s.* 8*d.* to 2*s.* 8*d.* and on the Mersey and Irwell from 3*s.* 4*d.* to 2*s.* 4*d.* and although the proprietors of the Dukes and of the Irwell and Mersey navigations are themselves carriers, yet other carriers trade on them also, for there exists a profit on the carrying trade itself.

But on the Railway the monopoly is complete, and although the projectors asserted in their prospectus in capital letters that " COMPETITION IS WANTED," yet the execution of the Rail Road excludes the possibility of competition, and the certainty of the carrying trade on it becoming a monopoly in their own hands is not very consistent with their high pretensions.

The fact is the whole machine is of so delicate and nice construction, the ball with which their game of Bagatelle is to be played must be so accurately directed, that they will not admit any others to throw it but themselves; and all which their public spirit has hitherto done to counteract the universal cry against their monopoly, has been a promise, to employ others and not their own engineer to make the loco-motive engines for them if they make them as well.

What then is the conclusion as to the competition between Railways and canals as to their mechanical, and as I may term it their physical construction. That the level railway 30 miles long between Liverpool and Manchester cannot put down two navigations, between the same points the first of which is *fifty* and the other *forty-five* miles long. Yet plans are projecting to transfer the trade of several existing canals to contemplated rail roads, where their projectors allow that no level can be obtained, on account of the inequality of the country, but that in aid of the loco-motives, fixed engines are to be erected to hawl up the passengers and goods, and to veer them down the declivities. And as by these means the distances may be so much shortened and the cheapness of carriage obtained with so much facility, the advantages will be so great as to supersede all canals and rivers, and to transfer the revenues deriveable from the trade now passing on them, into the pockets of the shareholders of the railway.

But luckily for those who cannot enter into arguments and calculations the PRO and CONTRA, with respect to the only railway of the latter kind now in existence has been stated by the same parties, and that I may not be accused of perverting them, I merely copy documents of different dates in which I beg you only to observe, that one was published BEFORE and the other AFTER the execution of the railway.

PRO.

To the Committee of the Promoters of the intended Railway, from the Cromford Canal, to the Peak Forest Canal.

September, 1824.

GENTLEMEN,

In pursuance of your directions, I have examined the country between the Cromford and the Peak Forest Canals, and have taken the levels for a Railway in the most direct line of communication with them, without diverging for the purposes of any local trade, which in fact would not be materially affected by any variation to the East or West; and taking into consideration the elevated, mountainous, and occasionally precipitous district of country, through which it passes, (the summit level of the Railway being a *thousand feet* above the Cromford Canal, and upwards of eleven miles in length,) the line on the whole is exceedingly favourable.

Although from the irregularities of a mountainous country, the expense of forming the line will be considerable, on the other hand it abounds with excellent materials for making the Railway. In a survey taken solely with a view of ascertaining the direction of the line, the necessary data are not afforded on which an estimate can be formed, but I have a feeling amounting almost to conviction, that the sum originally stated, (£4,000. per mile on the average,) will be sufficient for the purpose, and it may not be improper to add that I have had many years experience in similar works to assist me in forming an opinion.

The Railway is proposed to be constructed on the system of Levels and Inclined Planes, by which Steam Engines may be employed as the moving power to convey the waggons.

In compliance with the wishes of the Committee, I have estimated the *probable trade of* the Railway. Although such a statement can only be considered as an approximation to the truth, it is self-evident that a communication which forms the *connecting link* to several well established canals,—which *shortens the distance of* intercourse, between the great manufacturing districts of Lancashire, and of Derbyshire, and Nottinghamshire, and also of the Eastern and Southern Agricultural Counties,—which will save time and expense in transport,—which will convey as cheaply, and with more expedition than a Canal, and be effected at ONE FOURTH OF THE COST,—which has in its course valuable mines and extensive quarries of limestone and gritstone,—it is evident (I repeat) that such a communication cannot fail to REMUNERATE AMPLY THE PROMOTERS OF THE MEASURE.

(Signed) ENGINEER.

PROBABLE REVENUE.

	Tons.		£.
Grain as before stated, ..	40,000,	carried 30 miles at 2d. per ton, per mile, ...	10,000.
Coal, ...	60,000,	on the average carried 10 miles at 1d.	2,500.
Lime and Limestone	10,000,	8 miles at 1d.	333.
Paving Stones, Slate, &c. .	10,000,	30 miles at 1d.	1,250.
Hopton Wood Stone and Gritstone	5,000,	average 20 miles at 1d. ..	468.
Pig Iron, Bar Iron, and Lead	4,000,	30 miles at 1d.	500.
Timber, Hay, &c.	1,000,	30 miles at 1d.	125.
Wool and Cotton, (raw)..	2,000,	30 miles at 2d.	500.
Nottingham, Derby, and Leicester trade to Manchester and the Neighbourhood, ...	2,000,	30 miles at 2d.	500.
Manchester trade to the southward and eastward,	5,000,	30 miles at 2d.	1,250.
Huddersfield and Yorkshire trade, ...	1,000,	30 miles at 2d.	250.
Groceries, Spirits, &c. ..	1,000,	30 miles at 2d	250.
Sundries, as Hops, Cheese, Salt, Earthenware, Dying and Bleaching Goods, Moulding Sand, Provisions, and many other Articles, ...	3,000,	30 miles at 2d.	750.
			£18,676.
From which deduct the repairs of 32 miles of Railway, at £30. per mile, ...	960,		
Agency, and Incidental Expences, ...	1,040,	....	2,000.
Being 11 per Cent, on a capital of £150,000.			£16,676.

CONTRA.

CROMFORD RAILWAY.

August, 1831.

Dr	£.	s.	d.	Cr.	£.	s.	d.
To amount of calls received to this day, 15th June, 1831	127,136	0	0	By contractors for forming, &c.	87540	16	3
To amount borrowed on mortgage -	31,910	0	0	By engine houses wells, &c. -	7246	10	2
To tonnage received on the southern part of the railway .	959	11		By Iron, Timber, and materials	21014	18	8
				By laying rails, and carriage of them, including blocks & plugs	6634	15	11
				By wharfs and warehouses -	2711	6	10
				By machinery, putting up engines, &c. -	13240	18	3
				By land, -	4378	17	4
				By tenants damages - -	449	6	5
				By expenses of general meetings, and the committee -	843	12	11
				By expences of obtaining the act, and law clerk's bills, & expenses -	4999	6	9
				By Engineer's and assistant's salaries -	5359	19	0
				By extra work	1174	10	4
				By miscellaneous expences	1784	8	6
				By repairs of road and trade expences -	1130	15	6
				By interest on mortgages and loans - -	817	2	1
				By balance in the treasurer's hands - -	678	6	1
	£.160,005	11	0		£.160,005	11	0½

This last Rail Road, has been constructed upon the principle which must be adopted when no general level can be obtained. It is one where locomotive Engines are to be used on the levels, and stationary Engines to hawl the carriages with passengers, and goods, up the inclined planes and let them down. This line shortens the distance between Manchester and the junction of the Derbyshire Canals, with the Trent and the Soar, and consequently with the Eastern and Southern Agricultural Countries, more than one half viz. 56 miles instead of 118 miles, and yet *not one ton* of all the great commerce, announced in the first account, has ever passed on it for the whole distance, and no carriage whatever, except that which conveyed the Committee, on their triumphant tour on its opening, all the trade having been confined to that of a little coal at the southern end.

There are on it seventeen stationary Engines, and the section of it is represented in the annexed sketch; there it stands

> "wasting its sweetness in the desert air"

and may be had cheap, the owners having no further use for it, and it being not at all the worse for wear.*

It is not however useless to every body. Warnings are to the wise, as good as examples. The total failure of this promising speculation has made other speculators in Railways pause a little in their rapid progress.

While the Cromford and Peak forest was as yet unfinished, the Engineer of the Liverpool and Manchester was determined not to be out done by his brother Engineer, so he projected a more magnificent scheme, and as his own practice had exceeded his imagination in that instance, he determined to let his imagination out do practicability in his other projects. Two were brought forward under his authority from Manchester, the first to Leeds, the second to Sheffield. The genius rose with the difficulties to be encountered, and what was thought insuperable in the first project was overcome in the last.

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* The present price of £100 share is £20.

In a Report on the former, published in the Globe of the 1st January 1831, the following passage occurs.

After stating the course which the Manchester and Leeds Railway is intended to take, the Report continues as follows:—"In no other direction could a practicable line be found, without the necessity of a tunnel several miles in length, or very steep inclined planes, which would require the aid of powerful stationary engines; the former being objectionable not only from its extent, but from steam and sulphurous gas, which the loco-motive engines would leave in passing through it; and the latter being exceptionable on account of the attendant delay and the danger of ascending steep acclivities."

This opinion of the danger of passing through long tunnels by means of loco-motive engines, which necessarily require a constant supply of burning fuel, and therefore vitiate confined atmospheres, is founded, no doubt, on general experience of the difficulty of obtaining sufficient ventilation through extensive subteraneous air-courses, especially when those channels lie at a great depth from the surface. That this danger is not imaginary, is proved by the issue of an attempt, made three or four years ago, to pass through the tunnel of the Huddersfield canal in a boat propelled by a moveable steam-engine.

The experiment had nearly ended in the suffocation of every person in the boat by the gas from the burning fuel. The hazard of long and steep inclined planes must be evident to every one who considers, that heavy loads are trusted upon them to the precarious tenacity of chains or ropes, the breaking of which can scarcely fail to be destructive to carriages and their contents. Of this danger also, a practical illustration was lately given on the inclined plane at Middleton, in Derbyshire, where three waggons broke loose from the rope to which they were attached, and descended the plane with such velocity as caused them to be dashed to pieces at the bottom.

Another objection to long tunnels is derived from the slow progress of the workings, and their enormous expense.

The Huddersfield canal tunnel of about 3¼ miles in length was not completed in less than seventeen years, at the cost of £130,000. The new tunnel (2888 yards in length) by which the Trent and Mersey canal penetrates Harecastle Hill was executed at a much later period, with all the advantages of improved methods of working. It required, nevertheless, seven years for its completion, and is known not to have cost less than the sum just mentioned.—Inclined planes, too, are not only extremely expensive by their first cost, but by the constant outlay of money to maintain the stationary steam engines which are required to draw loaded carriages along them. This objection is of additional force, when TWO PLANES, meeting each other like the roof of a house, are necessary to convey carriages over great elevations.

Notwithstanding these powerful arguments against tunnels and inclined planes, as forming part of the system of railways, arguments which must doubtless have been urged upon the Directors of the Manchester and Leeds Railway by the two eminent engineers whom they employed to make the surveys, it is not a little remarkable that a plan of another Railway *has been professionally furnished by one of those gentlemen*, of which not only tunnels and inclined planes, but even underground inclined planes, form a striking feature.

The Railway alluded to, is proposed to be carried from Sheffield to Manchester, over the high Peak of Derbyshire, at the elevation of 1080 feet above Oldfield Lane in Salford, its western extremity. To accomplish this the following inclined planes, among others, will be required:—

		Miles.		
No. 1.	From Sheffield	4	in length and rising	1 in 82
No. 2.	....	1¼	...... ditto......	1 in 32
No. 3.	....	3¼	...... ditto......	1 in 195
No. 4.	....	1½	...... ditto......	1 in 18
No. 5.	....	1¾	...... [illegible]......	1 in 22
No. 6.	....	5	...... [illegible]......	1 in 92

A comparison of the inclination of these planes, with that of the Whiston Plane between Manchester and Liverpool, which rises 1 in 96 for the length of a mile and a half, will be found on the whole greatly to the disadvantage of the Sheffield line.

With respect to the Sheffield line, besides a considerable number of short tunnels it is a part of the plan to penetrate through a mountain between that town and Hathersage, by an *inclined tunnel* (see figure No. 3) upwards of three miles long.

Two other very steep inclined planes (No. 4 and 5) are also projected, the one to be carried under ground near Castleton, the other under Rushop Edge.—Of the whole number of planes contained in the foregoing table, there are three (Nos. 2, 4 and 5,) which are too much inclined to be worked otherwise than by stationary steam-engines.

After this statement, it cannot be unfair to ask, how is the palpable inconsistency to be reconciled between the opinion *expressed* in the Manchester and Leeds report and that *implied* in the plan of the Manchester and Sheffield railway, the latter of which originates with *one of the engineers*, who so decidedly declared against tunnels and inclined planes on the Leeds line.

A Bill for the Manchester and Leeds Railway was not passed in the last session of Parliament, that for the Manchester and Sheffield was. Among those who were subscribers to the latter, were many of the share-holders in the Manchester and Liverpool Railway, who, whether they doubted the *entire* success of their own undertaking, or compared the practicability of the Manchester and Sheffield line, with that of the Cromford and Peak forest, or distrusted the imagination of their engineer; attended at a meeting to consider the expediency of proceeding with the work, and although there were 1120 to 1068, constituting a majority of shares in favour of proceeding, yet that majority yielded to the suggestions of the minority and it was ultimately resolved that the execution should be postponed six months.

Warned by similar experience the subscribers to the Leeds and Liverpool Railway have postponed their intended proceedings.

Indeed, with the dubious exception of the Liverpool and Manchester Railway, and of those Railways which have been formed solely for the purpose of conveying coals or heavy minerals on a descending line, to the ports of shipment, and of which the Stockton and Darlington, is the best example; the Railways, for which acts have been obtained, present no great inducement for the investment of capital, if we may judge by the prices of those whose shares are in the market, and the silence respecting the others, which bear no price or value whatever.

Even with the advantage of the descent, I believe it will be found that the rates of conveyance per mile on Railways, are greater than on equal distances on any Canal in England.

You will have seen p. 8 that Stone is conveyed from Bath to London, 150 miles on Canals, for 9*s.* (exclusive of tolls), which is at the rate of about twelve sixteenths of a penny, per ton per mile; also, that Iron is conveyed between Birmingham and London, at fourteen sixteenths of a penny per ton per mile, and that in both these instances the boats return empty.

The bare haulage or locomotive power account in the Liverpool and Manchester Railway is eleven sixteenths of a penny per ton per mile, and it is also stated in the Report, that "*no allowance is* "*made for wear of materials except what is com*-"*prised in the actual repair;* and this is for locomotive power only, on the most favorable line in England for a level railway, whereas on the two lines of Canals above mentioned, the profit of the carrier and all wear and tear are included, and the Barges have to navigate backward and forward through 116 locks in the first instance, and 160 in the last; and yet, the cost per ton per mile is only twelve sixteenths in the first, and fourteen sixteenths of a penny in the latter instance.

This comparison would be sufficient were there no other methods of obtaining one, but fortunately there exists a Canal on which a comparison can be made of the most accurate nature.

I allude to the Canal between Edinburgh and the Duke of Hamilton's Coal pits near Falkirk, called the Union Canal, 28 miles in length and on a perfect level.

On that Canal, boats are haled not only by horses, but also by steam tugs, and the actual work done by each is according to thc following statement.

The steam tug takes in its train three coal boats each holding 45 tons, and travels with them at the rate of two miles per hour; returning afterwards with the empty boat at the rate of three miles per hour.

The expences incurred in each trip to Edinburgh and back may be estimated as follows:—

Coal consumed by the Engine, 3 tons at 5*s.* 6*d.* . . .	0	16	6
Wages of three men employed in the tug for two days at 9*s.*	0	18	0
Wages of three men, one in each lock, who also discharge the Coal, each trip 6*s.* 6*d.* . .	0	19	6
Wages of three boys in do., at 4*s.*	0	12	0
Wear and tear of steam tug and interest	1	4	0
	£ 4	10	0

This is rather more than four sixteenths of a penny per ton per mile. The expence of towing by horses would be £6., about six sixteenths of a penny per ton per mile.

I think therefore that the opinions inferred in in page 3, from the Liverpool and Manchester

Railway, that Railways would be inadequate to the conveyances of heavy goods in competition with Canals are correct.

But say the friends of Railways, the expedition obtained renders them so superior to Canal conveyance that if placed in competition, even at any expence, that circumstance alone will give them the superiority.

Having first referred to the fact in p. 13, that the expedition on the Liverpool and Manchester Railway has not superseded the traffic on the Duke of Bridgewaters Canal, and the Mersey and Irwell. I answer:—

1. That on the great articles of internal communication, such as Stone, Lime, and above all Coals, cheapness is of primary importance, and expedition of none at all.

2. That in internal communication those articles bear a proportion of ten to one at least to any other.

3. That even in comparatively valuable articles, cheapness is of more importance than even expedition, and were there any doubt on that subject, I appeal to the fact that one third at least of the manufactured articles from Manchester to London, are conveyed for the sake of saving from 10 to 15*s*. per ton on the freight, through the Rochdale and Huddersfield Canals along the rivers Calder and Aire, to Goole or Hull and from thence to London.

Although they are exposed,

1. To the hazards of a Sea-Voyage, of two hundred miles;

2. To transhipment once if not twice at Selby, or Goole, or Hull;

3. To a certain additional delay of at least 10, or 14 [illegible] as compared with the direct line

which is regularly travelled by Messrs. Pickford, and other Carriers, in 5 nights and 4 days.

Yet I have been told that the expenses of the loco-motive powers on Railways, are owing to the velocity, and that if the velocity was reduced the expenses would be much lower. It has been seen above that the only profitable part of the Railway trade is the carriage of very light goods and passengers, to whom velocity is every thing, but it is clear that velocity with expence, and slow motion with cheapness are incompatible unless there are *four* lines of Rails, instead of two on the same railway; and the expence of four lines of rails would render all the expences of the Railway in earthwork and Rails nearly double that of two, and when it is known that the expence of the Liverpool and Manchester Railway, for the *construction* alone has been one third more per mile than that of the dearest Canal in England, the comparison will assume a shape much more unfavourable to Railways.

I will add but little on the last feature of the general opinion entertained that similar schemes under circumstances dissimilar to those of the Liverpool and Manchester Railway would not succeed. For where in England I may ask are similar circumstances with respect to internal communication to be found. London was described, by an ingenious foreigner, as

> "Une province couverte de maisons"

but the description is much more applicable to Manchester and the surrounding neighbourhood. A circle described from the centre of that town with a radius of 30 miles would include a population much larger than that of London; a population much more dependent upon one another than that of London; and all dependent upon, and connected with the Port of Liverpool, and some parts of it distant 60 miles from the other.

In London, there are three cities, one the city of Gentry, the second that of Merchants, and the third of Manufacturers. Describe a circle round St. Pauls' with a radius of 5 miles and within that area which is only a thirty sixth part of that proposed to be drawn round Manchester, all kinds of communication either for pleasure, or business, are facilitated by innumerable means at very little expence. Through the diameter of this latter circle passes one of the first loco-motive powers in nature, the unimitable Tide, costing nothing and performing every thing, not depending on two bits of parallel iron, and some few tons of coals, but twice in twenty four hours urged on by "the mighty strength of the deep-flowing Ocean*."

It is true that there is a great deal of travelling into London, but it is from all points of the compass, and in no one direction is there sufficient to maintain a Railway for travellers alone, were they practicable in every direction, as they are in fact, practicable only in a very few.

For heavy goods the means of supply are amply sufficient. No internal Coals can compete with those brought by Sea, no lime with that which is dug within 30 miles and brought by the tide. To Stone for building and paving, from all parts of England and Scotland, to Grain and to Timber from all parts of the world, the same Sea and tide provide a means of conveyance, and were it otherwise, Railways cannot enter into competition with the existing Canals and Rivers which aid in that supply. Nor do those Canals and Rivers

[illegible]θυῤῥείταο μέγα σθένοσ Ωκεανο͂ιο tempt a competition, for with the exception of the Somersetshire Coal Canal, I believe that there is not one concern of the kind South of the Thames, which has not proved a very unprofitable investment of Capital.

I should lengthen this letter too much were I to enter so fully into the subject, as the documents which I have by me would enable me, but as the printing of it has been delayed in expectation of the Report on the second half year of the Liverpool and Manchester Railway being published which has just now appeared, I shall add a few lines which that publication has occasioned.

This Report contains no details to enable me to analyse the accounts in the same manner in which I have done those of the preceding half-year, but not only does it not contain any thing to invalidate the deductions I made in the former part of this letter but as far as the general nature of those accounts will allow, confirms them in every respect.

It states that "*the gross receipts have been very large but that the disbursements continue proportionably heavy, the charge for engine power and for maintaining the way being the two principal items.*"

Now without cavilling at the trifling fact that the proportion of the disbursements to the receipts for the last half-year is something larger than the preceding, we have from the statement of the former Report reason to believe that the sum to be added for the wear of the *Loco-motive Engines* ought to be considerably larger in the last half-year than the preceding, on the principle there assumed by the Directors themselves referred to in p. 22, and with respect to the *maintenance of the way* it cannot have been less than the sum stated in the former account, where under the head of "*Sundry Disbursements*" are as I have shown above, comprehended all the charges which are analogous to the *proprietary* expences on Canals. After deducting the sum of £2910. for interest, there remains £9817. which doubled for the twelvemonth amounts to £19634. for the year, or £650. per mile.

Now the gross annual expence for the same departments in the principal Canals in England, viz:—

1. The grand Junction, 132 miles with branches,
2. The Kennet and Avon, 87 miles.
3. The Leeds and Liverpool 130 miles.

The first is £260. per mile
The second £170, do.
The third £150. do.

Again, the increase of passengers is in a much greater proportion than the increase of goods and that of coals is not worth notice. To prevent as much as possible accidents and insure security "*The Speed is to be materially diminished over the high embankments;* and *a considerable disbursement in diminution of profits is contemplated in the erection of checks and guard-rails.*" These latter circumstances prove that the Directors wisely look to passengers as the leading source of revenue. The carriage of cattle on which so much was said seems to have failed, for the "Butchers could not afford to pay ninepence "per head, *(about twenty shillings per ton)* for "sheep; and the charge is to be *lowered* to six-"pence, *(about sixteen shillings and eightpence "per ton)* with some expectation of a pro-"fitable result.

The total receipts by the latter report for the year have been £155,701 7 7

The disbursements . . £ 84,408 12 1
being more than 54 per cent on the Receipts.

A transcript from the Morning Chronicle of Tuesday, 17th., January, 1832, with reference to another material part of my letter confirms apprehensions expressed in p. 19, as to the danger of inclined planes and stationary engines.

Accident on the Railway.

" On Monday Evening an accident involving
" considerable loss of property took place on the
" Bolton and Leigh Railway. A train of lug-
" gage waggons had ascended the inclined
" plane at Baglane, and when at the top the rope
" was detached from them before the whole of
" them were on the level. It unfortunately
" happened that the hind portions out-balanced
" the front waggons, and the whole began to
" descend with great rapidity, and near the bot-
" tom came in contact with a train of coal wag-
" gons, when the concussion was so great as to
" force from the line the luggage waggons into
" an adjoining field. The hogsheads, tubs, &c.,
" with which they were loaded, were broken to
" pieces and their contents consisting of oil,
" butter, treacle, corn and other articles rendered
" unfit for use, by being thrown together ; but
" little of the property is saved, and the loss is
" estimated at about £800."

Circumstances of this kind are to be contemplated upon most of the projected lines deducting materially from the profits of the concern.

With respect to the probable loss of lives the danger is not less, and the responsibility infinitely greater.

Still I am not one of those who would wish to check the progress of improvement.

The effect of the Railway between Liverpool and Manchester has been beneficial to the public by reducing overgrown monopolies within reasonable bounds. Although the success of Railways is more than problematical, yet the projects for making them, have stimulated the more opulent Canal Companies to exert themselves to effect improvements in their canals, materially contributing to the public benefit, instead of dividing among the Proprietors of them, the enormous profits which have been unexpectedly made and which were not contemplated in their first projection.

The improvements contemplated and executing on the Old Birmingham, the Aire and Calder, and the Oxford Canals confirm this assertion.

I hope I have fairly stated the advantage of the Liverpool and Manchester Railway, giving due credit to the Gentlemen who have so much to their honor projected and completed that great experiment; which, although it has succeeded in the point they least expected it, and failed in that from whence they contemplated the greatest advantages, has proved a great public benefit.

But it is not improbable that the travelling and the carriage of very light goods will eventually become the only source of income and the attempt to carry heavy goods be abandoned.

Public opinion seems to have fully decided this point, and the promoters of the new schemes brought forward in the present session, seem to content themselves with these only.

Indeed the object of the London and Birmingham Railway seems to be confined almost exclusively to travelling if we may judge from the plan and the semi-official observations circulated with it, although both the promoters and the engineers disavow any responsilibity for the accuracy of them, The skeleton prospectus of the Southampton and London Railway, is rather a little more extended but of the ten enumerated "*prospective advantages* of its "*great Revenue*"

1. Butchers' meat
2. Fish
3. Passengers
4. Live sheep and lambs
7. Foreign fruit, poultry, and eggs
9. Milk, butter, eggs, pigs, fruit, vegetables, &c.
10. Troops, specie, and Mails! form seven of the articles, and the other three are
5. Grain!
6. Chalk!
8. Building materials!

The cautious and even unsanctioned generalization observed in the prospectus of the London and Birmingham Railway, after the laborious and expensive investigation of nearly three years, & the ~~with its~~ minute and reiterated nothingness, the result, as it should seem of some desultory guesses in that of the London and Southampton Railway, would reasonably induce the belief that the only part of the public likely to derive benefit from either, are of the same kind with those, the items of whose charges form such prominent features in the expenditure of the Cromford and Peak Forest Railway. The Solicitor, the Engineer, and the Iron-master. No Proprietors of river and canal navigations are absurd enough to suppose that their interests must not give way to real improvements in the modes of communication, but the result of my journey into the north in the last autumn, has been to satisfy my mind that the canal proprietors, and much less those of river navigations are not likely to suffer from what has been hitherto done by Railways, nor to fear what is projected; and if the facts and arguments stated above shall tend to dissipate unfounded alarms in others, it will afford gratification to

Dear Sir,

Yours very truly,

F. P.

London, February 1st., 1832.

P. S. The statements and observations in p. 18, 19, and 20, are principally taken from a letter published last summer in the Liverpool paper, written by a gentleman well acquainted with the facts and perfectly qualified to judge of the subject.

Printed by J. Teuten, 14, Dean Street, Soho Square.

LIVERPOOL AND MANCHESTER RAILWAY.

REPORT.

LIVERPOOL, Sept. 28th, 1831.

The Directors at the General Meeting held in this place exactly six months ago, laid before the Proprietors the result of the working of the Railway for 3¼ months, up to the 31st of December, 1830.

They have now to report the result of six months' operations from the 1st of January to the 30th of June last. During that period the Company's business, both in Merchandise and Passengers, has been gradually and steadily on the increase. The tonnage of Merchandise conveyed between *Liverpool and Manchester* for the six months amounts to

The tonnage of Merchandise conveyed between *Liverpool and Manchester* for the six months amounts to	35865	Tons.
Between *Liverpool and the Bolton Junction.*	6827	—
	42692	—
Coals, principally from the Huyton Collieries, a distance of five miles from Liverpool	2889	—
Number of Passengers booked at the Company's Offices	188726	

The gross receipts on this traffic are as follows:

On Passengers	£43,600	7	5
On Merchandise	21,875	0	1
On Coal	218	6	2
	£65,693	13	8

Amounting to 4s 7¼d each, per Passenger booked, and 10s 3d per ton of *Merchandise* conveyed.

The disbursements upon the same traffic amount to	£35,379	3	10
Or belonging to the Coaching department	£19,099	16	5
To Merchandise, &c.	16,269	7	5
	£35,379	3	10

These disbursements the Directors, from the classification of their accounts, are enabled to apportion to the different departments, and under different heads of Expenditure, as follows.

	Per Passenger booked.	Per Ton of Merchandise.	COACHING DEPARTMENT.	MERCHANDISE DEPARTMENT.	TOTALS.
	s. d.	*s. d.*	£. *s. d.*	£. *s. d.*	£. *s. d.*
Disbursements exclusively in the COACHING DEPARTMENT, consisting of Porterage, Salaries, Repairs, &c. including 2½d per Passenger for Omnibusses ..	0 7¾	.. ..	6146 11 0	.. .. ..	6146 11 0
Disbursements exclusively in the MERCHANDISE DEPARTMENT, consisting of Porterage, Salaries, Cartages, &c. &c.	.. ..	3 10¾	.. .. ..	8306 3 11	8306 3 11
LOCOMOTIVE POWER ACCOUNT, proportioned according to the number of Trips of 30 miles, in each Department respectively, comprising Repairs of Engines, Wages, Coke, &c. including £33 17s. 3d. for conveyance of Coal as back carriage	0 5¾	1 8¾	4505 18 10	3692 14 5	8198 13 3
SUNDRY DISBURSEMENTS, proportioned according to the *Receipts* in each Department, consisting of Police Establishment, General Office Establishment, Maintenance of Way, Rates, Taxes, &c. including £2910 0s. 3d. for Interest of Money borrowed	0 10¾	1 11½	8447 6 7	4280 9 1	12727 15 8
Total Disbursements	2 0¼	7 7	19099 16 5	16279 7 5	35379 3 10
Amount of Profit	2 7	2 8	24500 11 0	5813 18 10	30314 9 10
Gross Receipts as per above statement	4 7¼	10 3	43600 7 5	22093 6 3	65693 13 8

The Directors have found the disbursements considerably heavier than they anticipated, especially that portion of them belonging to the Merchandise Department. It may be proper, however, to remark, that the quantity of Merchandise conveyed is comparatively small, the business at the present moment being on a much larger scale than the average business of the six months included in this statement, while the expence of Carriage will not keep pace in the same ratio with the increase of the tonnage. On the other hand, with reference to the present result, as no allowance is made for WEAR of materials (except what is comprised in actual repairs) the first six months will have some advantage over succeeding periods, from the Waggons, &c. being new to begin with. The above statement of Receipts and Disbursements has reference, of course, exclusively to the Traffic on the Line. The sum raised by the creation of new Quarter Shares being appropriated altogether to the building of Warehouses, Wharfs and Sheds, the purchase of Engines, Cranes and Waggons, and generally to the completion of the Road and the Works. The Directors have in their hands a net disposable balance equalling £4 10s per Share of £100, each of the old Quarter Shares being entitled to £1 2s 6d per Share, and the new Quarters, on which only £10 each was paid on the 30th June last, to 9s per Share. They accordingly recommend to the Proprietors a Dividend of £4 10s per Share out of the concern to the 30th of June last.

The Directors have now to submit to the consideration of the Proprietors a scheme for a spacious and commodious Tunnel, to be appropriated to the Coaching Department, and to extend from the Railway near Wavertree Lane to the site of the Cattle Market in Lime Street. The experience of twelve months has exhibited the inconvenience and very serious disadvantages of the Railway for Passengers terminating a mile and a half from the centre of business. The delay of thirty minutes in accomplishing the first mile and a half of the journey, and the necessity of resorting to the very imperfect and expensive accommodation of Omnibusses, have proved the extreme importance of bringing the Railway Carriers to the centre of the Town. With this object in view, and with the assistance of their able Engineer, the Directors have given the subject very mature consideration, and they are of opinion no plan of access embraces so many advantages, and at the same time is attended with so few difficulties, as the one now recommended to the Proprietors. The mode of executing the work will completely remove all the usual objections to Tunnels. The whole will be brilliantly lighted, and warmed, and ventilated, so as to become an object of interest and attraction. The egress of the proposed Tunnel is in the very centre of the Town, with spacious and convenient approaches in all directions, and the Directors are happy to add, that the project is approved by the Mayor and Common Council. The cost will probably be £100,000. including land and offices, which it is submitted would be advantageously laid out to effect the purpose in view, especially when it is considered that the present charge for Omnibusses is equal to the *interest* of the sum required. The directors therefore recommend an application to Parliament for authority to construct the Tunnel, and to borrow the requisite Funds for the purpose, with power vested in the Proprietors at large to convert the Loan into Capital by the creation of new Shares, should the Proprietors at some future time deem such a measure expedient.

The Directors will embrace the present opportunity of adverting to several points of importance to the concern, and of interest to the Proprietors. It will be observed, that the traffic in *Coal* has, hitherto, been altogether insignificant,—the owners of Collieries not being prepared with Waggons and Engines necessary for the Trade: the Directors however are happy to state, that, in addition to their present traffic with the Huyton and Whiston Collieries, they have lately made arrangements with two extensive Proprietors, both of whom have engaged from the Company Coal Depots at the Manchester end, for the purpose of carrying on a regular, and, the Directors trust, a very important business. The Wigan Branch Railway is in the course of its formation, and in less than a year may be expected to bring a very large traffic of Coal (besides General Merchandise and Passengers) upon the Liverpool Line.

The *Cattle* Trade the Directors have always considered would prove an important branch of their business, though from the extraordinary extent of Travelling by the Railway, and the consequent appropriation of a great portion of the Locomotive Power to that object, they have been unable as yet to commence this part of their undertaking. They have however provided a stock of Carriages, and propose to commence the Conveyance of Sheep on the 10th October next; and Horned Cattle as soon after as the requisite arrangements can be made. Pigs in considerable numbers they have already carried, these being included in the general amount of Tonnage above stated.

From a deliberate consideration of the position and circumstances of the Concern, it is evidently of the first importance to *extend* the aggregate amount of traffic on the Railway, in order that the unavoidable and heavy disbursements being distributed over a larger business may constitute a diminished charge per ton. With this view the Directors have erected a new range of Warehouses at Manchester, which will more than double their present accommodation for Merchandise at that end of the line. At the Liverpool Station they have constructed two spacious Sheds, with numerous Cranes for general business; and with reference especially to an extensive Coal trade, they have purchased two additional plots of Land and Premises in Wapping, and Ironmonger Lane, the possession of which opens to the Company a direct and valuable communication between the Railway and the King's Dock.

On the subject of Locomotive Engines the Directors have to report, that they have contracted for several new ones, besides the regular supply from Messrs. Robert Stephenson and Co.; they trust therefore they shall ere long be well provided with this indispensable machine.

The experience of twelve months has confirmed the conviction on the part of the Directors before expressed, that the Railway is capable of accommodating any imaginable extension of traffic. And in the event of one or more of the great lines of Railway lately projected coming upon the Liverpool and Manchester Line, and in consequence an additional station for Merchandize being desirable, it would be easy to construct another Tunnel for that purpose, direct to the vicinity of the Prince's Dock, which would thus, at a comparatively moderate cost, answer all the great objects of a North Line. This is a matter, however, evidently for future consideration, and it is only as such that the Directors have alluded to it at the present moment.

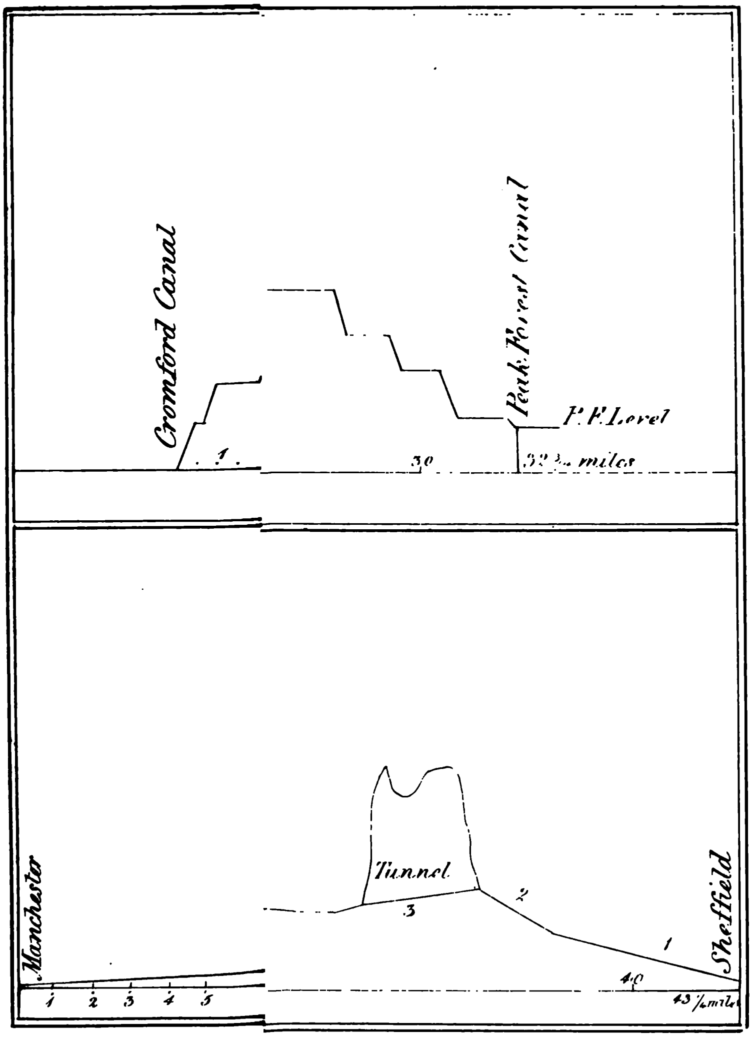
In conclusion, the Directors are happy to be able to state, that although nearly half a million of Passengers have now been carried, only one fatal accident has occurred, and that arose solely from the perverseness of the individual sufferer.

CHARLES LAWRENCE,

CHAIRMAN.

P. S.—A dividend of £4 10s per Share having been ordered, payable on the 5th October next, each Proprietor may receive the amount due on his Shares by application at the Company's Office, John Street, Liverpool, any time after the above date; and parties residing at a distance, upon a written request to the Treasurer, may have their Dividends remitted in a Bill at one month's date, or may have a credit lodged in their favor at Messrs Barclay & Co.'s London, for the amount.

⁂ *The net profit arising out of the Sunday Travelling, for the six months ending the 30th June last, amounts to 6s 10d per Share of £100.*


Cromford Canal
Peak Forest Canal
P. F. Level
1
30
32¾ miles
Manchester
1
2
3
4
5
Tunnel
3
2
1
Sheffield
40
43¼ miles

[illegible]